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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,556	07/11/2003	Carl M. Mahabir	202TR008A	5165

37535 7590 02/07/2007
LEGAL DEPARTMENT
NOVEON, INC.
9911 BRECKSVILLE ROAD
CLEVELAND, OH 44141-3247

EXAMINER

HOOK, JAMES F

ART UNIT	PAPER NUMBER
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3754

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/618,556

Applicant(s)

MAHABIR ET AL.

Examiner

James F. Hook

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-8,10-18,20 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-15 is/are allowed.
- 6) ☒ Claim(s) 1,4,10,16-18,20 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 5-8 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 10, 18, 20, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palmlof in view of Behr and Danekas. The patent to Palmlof discloses the recited crosslinked polyethylene composition (PEX) which inherently would have improved resistance to oxidation and UV light due to having the same limitations of applicants material in absence of any claimed additional structure to achieve these results, where the PEX is provided with 1-5% carbon black by weight of the polymer composition, the carbon black used can be furnace black, channel black, and others, where the PEX is crosslinked using a peroxide, and where antioxidants can be to the composition as well. The patent to Palmlof discloses using peroxide to crosslink the PEX but fails to disclose using a silane grafting method, and also fails to disclose the size of the particles of carbon black. The patent to Danekas discloses the recited crosslinked polyethylene composition (PEX) which inherently would have improved resistance to oxidation and UV light due to the discussion of UV resistance and inclusion of anti oxidant, where the PEX is provided with 1.5-15% carbon black by weight of the polymer composition, where the PEX is crosslinked using a silane grafting method, and where antioxidants can be to the composition as well, where the amount of

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carbon black can be adjusted depending upon the environment in which the tube is to be used. The patent to Danekas therefore discloses using a silane grafting method for crosslinking PEX utilizing peroxide. It would have been obvious to crosslink the PEX in Palmlof using any method such as silane grafting method as set forth in Danekas where such is an equivalent manner to crosslink PEX utilizing peroxide and such would provide efficient production of cross linked materials thereby saving production costs. The patent to Behr discloses that it is known in the art to utilize carbon black in a PEX composition where the carbon blacks used can be furnace blacks and channel blacks having grain sizes of 100-1,000 Å which converts to 10-100 nm. It would have been obvious to one skilled in the art to modify the carbon black in Palmlof to be of a size which can be less than 20 nm as suggested by Behr, where Behr sets forth that furnace black and channel blacks used in PEX can be formed of particles in this range, thereby setting forth the size of these known carbon blacks used in PEX layers which would insure proper crosslinking of the PEX thereby preventing premature failure and saving money.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosewicz in view of Palmlof and Harris. The patent to Kosewicz discloses the recited pipe comprised of a layer of PEX which is provided with carbon black, and an inner liner of uncrosslinked polyethylene (PE) where based upon the discussion of the PE layer blocking peroxides from the PEX layer is stating therefore that the PEX layer is crosslinked using peroxide. The patent to Kosewicz discloses all of the recited structure with the exception of thicknesses of layers and densities of materials, gel level,

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providing an outer layer of PEX with no carbon black, using HDPE as the PE used for the liner, suggesting how much carbon black is used in the PEX layer loaded with carbon black, and color coding. The thickness, and density of the materials used are all considered to be choices of mechanical expedients where one skilled in the art would only require routine experimentation to arrive at optimum values for use in specific environments and it would have been obvious to one skilled in the art to use routine experimentation to arrive at optimum values as such is a choice of mechanical expedients. It would have been obvious to modify the PEX in Kosewicz by supplying a specific amount of carbon black specifically 1-5% carbon black which teaches a range extending below 2%, and to form the PE of HDPE to form the layers where such is a known PE used to form a PEX layer as suggested by Palmlof where such would insure a proper amount of carbon black in PEX layers utilized in forming multilayer tubes where such would prevent premature failure of the material and would thereby save money. The patent to Harris discloses that it is old and well known in the art to color code tubes to identify what flows through them. It would have been obvious to one skilled in the art to color code the tubes of Kosewicz as modified to be of any color to identify the fluid flowing therein as suggested by Harris where such is an obvious choice of mechanical expedients and would enhance the use of the tubes by allowing for the identification of fluids therein.

Allowable Subject Matter

Claims 12-15 are allowed.

Claims 5-8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1, 4, 10, 18, 20, and 22-25 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed November 8, 2006 have been fully considered but they are not persuasive. With respect to claims 16 and 17, there are no specific arguments as to the rejection of these two claims other than the arguments against the references set forth previously. However, Palmlof teaches percentages of carbon black as low as 1% and it is immaterial whether such is considered the optimum range or not by Palmlof, such is still acknowledged as levels of carbon black used in PEX pipes. With respect to Harris, such is being used for the suggestion of providing color to identify the hose, where the argument that the entire outer layer is not so colored is immaterial when such is not claimed in this manner, therefore any color coding is considered to cover the claim language as it currently appears in the claim.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patent to Stachowiak disclosing a state of the art PEX pipe,

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including that it is known in the art to crosslink the PE with peroxide, AZO, or Silane methods.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

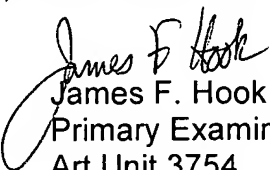
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Wednesday, work at home Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


James F. Hook
Primary Examiner
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JFH